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Project Hanford Management Contractor for the U.S. Department of Energy under Contract DE-AC06-96RL13200

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R. W. Bloom Fluor Hanford, Inc.

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241-Z D-4 C	ell RCRA	Closure
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Background

The 241-Z Treatment and Storage Tanks (241-Z) Resource Conservation and Recovery Act (RCRA) of 1976 treatment, storage, and/or disposal (TSD) unit consists of below-grade tanks D-4, D-5, D-7, D-8 and an overflow tank located in a concrete containment vault; and its associated ancillary piping and equipment. The tank system is located beneath the 241-Z Building, which is not a portion of the TSD unit. Waste managed at the TSD unit was received via underground piping from Plutonium Finishing Plant (PFP) sources. Tank D-6 within vault D-6 is a past-practice tank that never operated as a portion of the RCRA TSD unit.

Under DOE/RL-96-82, Hanford Facility Dangerous Waste Closure Plan, 241-Z Treatment and Storage Tanks (Closure Plan), 241-Z will undergo final or partial clean closure to the performance standards of Washington Administrative Code (WAC) 173-303-610 with respect to dangerous waste contamination from RCRA operations. The unit will be clean closed if physical closure activities identified in this plan achieve clean closure standards for all 241-Z locations. The scope of closure activities under this plan will be similar to the scope of 241-Z 'terminal cleanout' activities in support of PFP deactivation, that will include but are not limited to tank system decontamination and visual inspections or sampling to verify clean closure levels. Clean closed 241-Z tanks and/or structures will remain after closure for future disposition in conjunction with PFP decommissioning activities.

RCRA closure activities for the 241-Z Tank System will be completed and documented in phases in conjunction with the terminal cleanout of the various parts of the system. It is anticipated that the closure will be documented in a minimum of five parts for the four tank cells and the remainder of the residuals. Closure verification documentation of each of the tank cells containing RCRA tanks (D-4, D-5, D-7 and D-8) will be generated.

Purpose

The purpose of this document is to compile the basis for RCRA closure of portions of the 241-Z Tanks System that include the 241-Z D-4 Tank, its associated ancillary piping and equipment, and the D-4 cell containment structure.

Closure Activity Summary

All activities associated with closure of the D-4 tank cell were performed and documented as part of work package 2Z-04-01447. The work package provides a record of action taken on a daily basis in support of system closure. Section 7.2 of the closure plan (DOE/RL-96-82, Rev. 1) outlines the closure activities associated with the closure plan. The portions applicable to the D-4 Cell (Figure 1) include: D-4 tank, piping and ancillary equipment, cell floor including sump and void space beneath the tank, cell walls, and soil beneath the cell. All inspections were performed via remote video. Portions of the inspections were recorded on video tape for later review and to allow capturing of still images for inclusion in the record. Real time video in general provided a better image quality than those captured on tape and provided un-distorted color.

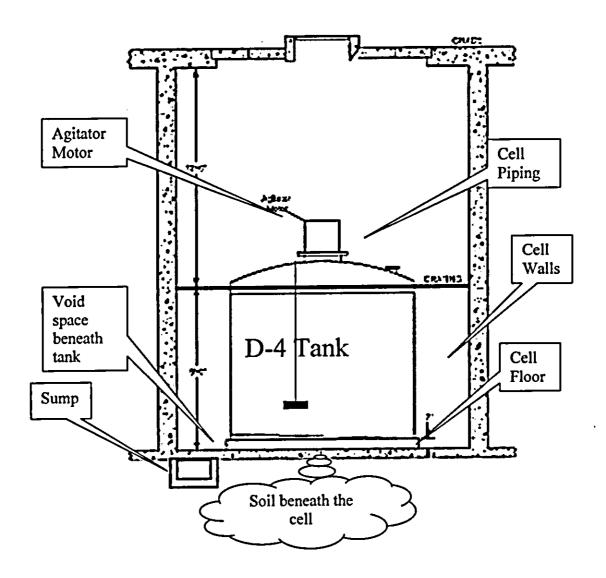


Figure 1. D-4 Cell.

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Closure Decontamination and Verification Checklist

Tank Closure (Closure Plan Reference - 7.2.1)

D-4 Tank Internals (7.2.1.1)

Method of closure: Decontamination/Inspection (6.2.1.1)

Material: Stainless Steel

Decontamination: Manual methods

Description of method used: Flush water from the D-5 Tank was inadvertently transferred via the overflow tank to the D-4 tank after the batch 286 transfer. Due to limited level in D4, the flush water was not agitated in the D-4 Tank and was discharged via D7 as a portion of the 288 batch transfer to Tank Farms. The interior of the tank was decontaminated by physical scraping and use of surfactants to wipe down the walls and floor. Video inspection confirmed removal of the material from the walls and bottom of the tank. After cleaning was reviewed and determined to be within clean debris surface requirements (6.2.1.1). Note: Closure of the piping entering and leaving the D-4 Tank is addressed in a later section.

Authorized Representative: Richard W. Bloom

Name Signatur

Definition of clean debris surface from Table I, Alternative Treatment Standards for Hazardous Debris (40 CFR 268.45): "Clean debris surface' means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discoloration's, and soil and waste in cracks, crevices, and pits, may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area".

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D-4 Tank External Surface (7.2.1.2)

Method of closure: Inspection/ Sampled (6.2.1.2)

Material: Stainless steel

<u>Decontamination</u>: The overflow of the tank was due to a process water leak. Inspection of the tank exterior did not indicate any removable contamination only slight potential staining from waste activities. The staining was sampled to confirm no further decontamination beyond that associated with follow up response from the overflow.

<u>Description of method used:</u> Process history of the tank indicated that due to an in leakage of process water the tank had overflowed to the cell thereby potentially contaminating some tank exterior surfaces. A likely area of potential contamination of the tank external surface was identified by visual inspection for closure verification sampling. This area of potential contamination was sampled and analyzed per HNF-25105, Rev. 1. The results for sample B1K9V1 met the analytical closure standard (6.2.1.2) and are summarized in Appendix A.

Authorized Representative: Richard W. Bloom Name

Signature I

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Piping and Ancillary Equipment Closure (7.2.2)

The piping and ancillary equipment associated with the D-4 tank included the process piping, waste transfer pump and agitator.

Process Piping

Method of closure: Removed (7.1) / Sampled (6.2.1.2).

Material: Stainless Steel

<u>Decontamination:</u> Prior to initiation of this package and final steam jet transfer from the D-4 tank to the D-7 tank, flush water from the D-5 tank that had overflowed during the post batch 286 transfer flush (batch 287).

Description of method used: Process piping within the cell was removed up to the cell walls per FMP-04-22343. Removal of lines not associated with RCRA dangerous waste operations was optional under the CERCLA removal action work scope and was outside the scope of RCRA TSD unit closure. For closure of inaccessible piping that remains in the walls and within the tank, samples of the piping were taken and analyzed per HNF-25105, Rev. 0. Sample results (B1FXY6, B1FXY7, and B1FXY8) met the analytical closure standard (6.2.1.2) and are summarized in Appendix A. Note: The sample results were supplemented by field nondestructive analysis (NDA) results for the D-4 cell that further demonstrated the effectiveness of pre-closure process piping flushing and steam jet transfer.

Authorized Representative: Richard W. Bloom

Name

Date

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Transfer Pump - Steam Jet

Method of closure: Sampled (6.2.1.2).

Material: Stainless Steel

Decontamination: Final steam jet transfer from the tank to the D-7 tank, flushed water from the D-5 tank that had overflowed during the post batch 286 transfer flush (batch 287) along with the self cleaning aspect associated with steam injection.

<u>Description of method used:</u> In support of closure of inaccessible piping, samples were taken and analyzed per HNF-25105, Rev. 0. Sample results supplemented by field NDA results demonstrated the effectiveness of pre-closure process piping flushing. The results for samples B1FXY6, B1FXY7, and B1FXY8 (Appendix A) met the analytical closure standard (6.2.1.2).

Authorized Representative: Richard W. Bloom

Name

_9/26/04 Date

Agitator

Method of closure: Inspection (6.2.1.1)

Material: Stainless Steel

Decontamination: Manual method

<u>Description of method used:</u> Agitator was also inspected during tank internal inspection to verify clean debris surface (6.2.1.1).

in debris surface (6.2.1.1).

Authorized Representative: Richard W. Bloom

Name

= 9/c4/06

^{*} Definition of clean debris surface from Table I, Alternative Treatment Standards for Hazardous Debris (40 CFR 268.45): "Clean debris surface' means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discoloration's, and soil and waste in cracks, crevices, and pits, may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area".

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Activities for Closure of the Concrete (7.2.3)

Tank Cell Floor and Sump

Method of closure: Decontamination/Sampled (6.2.1.2).

Material: Painted concrete Decontamination: Manual

Description of method used: The cell was manually cleaned initially by physically removing material from the floor, then further cleaned by wiping and scraping with a surfactant under work package 2Z-04-01447. The unpainted cell sump was cleaned to a level meeting clean debris surface requirements (6.2.1.1). The visual standard was not pursued on the remainder of the floor since it would have posed an unnecessary risk to the workers to remove all of the surfactant, which provides radiological contamination control as low as reasonably achievable (ALARA). The cell was cleaned to general housekeeping standard leaving some residual dirt on the floor of the cell in the surfactant. After cleaning, the painted floor of the cell was sampled near the cell sump and analyzed per HNF-25105, Rev. 1. The results for sample B1K9V2 (Appendix A) demonstrated the effectiveness of the decontamination and met the analytical closure standard (6.2.1.2).

Authorized Representative: Richard W. Bloom

Name

9/24/06 Date

Tank Cell Walls

Method of closure: Inspection - Sampled (6.2.1.2)

Material: Painted concrete Decontamination: N/A

<u>Description of method used:</u> Video inspections of the cell walls identifying a watermark on the wall approximately 18 inches above the floor, confirmed process history that the tank had overflowed and flooded the cell floor. A sample at a point on the wall below the observed water mark was taken and analyzed per HNF-25105, Rev. 1. Sample results (B1K9V2) met the analytical closure standard (6.2.1.2).

Authorized Representative: Richard W. Bloom

Name

natura Date

Definition of clean debris surface from Table I, Alternative Treatment Standards for Hazardous Debris (40 CFR 268.45): "Clean debris surface' means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discoloration's, and soil and waste in cracks, crevices, and pits, may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area".

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Void Space Beneath the Tank

Method of closure: Inspection (7.2.3)

Material: Concrete Decontamination: N/A

Description of method used: Video inspection of the cell did not indicate cracking of the tank base or a void space between the tank and base.

Authorized Representative: Richard W. Bloom

Name

9/24/04

Soil Beneath the Cell (7.2.4)

Method of closure: Inspection – No pathway to soil (7.2.4)

Material: Soil

Decontamination: N/A

Description of method used: Video inspection did not reveal cracking in the tank base, cell floor or sump. Minor surface checking of the concrete surface of the cell walls was visible during the video inspection but none were evaluated as having a reasonable potential to have penetrated the thickness of the concrete.

Authorized Representative: Richard W. Bloom

Name

Conclusion

Based on activities performed under work package 2Z-04-01447, that included decontamination, visual inspections, sampling and analysis, and evaluation of the sample data (Appendix A), the portions of the 241-Z tank system within the D-4 Cell have met RCRA closure standards specified in DOE/RL-96-82.

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References

- DOE/RL-96-82, Hanford Facility Dangerous Waste Closure Plan, 241-Z Treatment and Storage Tanks, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- Memo, R.A. Bushaw to J. F. Durnil, "Results for Plutonium Finishing Plant TK-D5 Samples, Batch 286 Collected March 2003", T4160-RAB-03-011, dated May 7, 2003.
- Letter, R.A. Bushaw, CH2MHill to A. G. Westra, FH, "Results for Plutonium Finishing Plant TK-D5 Samples, Batch 288 Collected July 2004", CH2M -0402434, dated August 17, 2004.
- 2Z-04-01447 D&D 241-Z TANK D4 / REMOVE PIPING & EQUIPMENT
- HNF-25105, Rev. 0, Sampling and Analysis Plan for Characterization of 241-Z Tank System Piping, Fluor Hanford, Richland, Washington.
- Letter, R.A. Bushaw, ATL, to R. Clinton, FH, "Final Report for the Swab Samples Received from Plutonium Finishing Plant in November 2005, SAF Number R006-07" 05-ATL-118, dated December 8, 2005.
- HNF-25105, Rev. 1, Sampling and Analysis Plan for Characterization of 241-Z Tank System Piping, Attachment B, Fluor Hanford, Richland, Washington.
- Letter, G. P. Ritenour, ATL, to R. Clinton, FH, "Final Report for the Swipe Samples from Plutonium Finishing Plant Building 241-Z 4-D Pit in August 2006", 06-ATL-135, dated September 1, 2006.

241-Z D-4 Cell RCRA Closure	HNF-31197 Rev. 0
Attachment A - Sample Results	September 2006

ATTACHMENT A

Sample Results

241-Z D-4 Cell RCRA Closure	HNF-31197 Rev. 0
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241-Z D-4 Cell RCRA Closure Attachment A - Sample Results

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Pipe Sampling Data Summary (Samples B1FXY6, B1FXY7, B1FXY8)

As part of RCRA closure of 241-Z tank system samples were taken at three locations in the piping system per HNF-25105, Rev. 0, Sampling and Analysis Plan for Characterization of 241-Z Tank System Piping. The results of the sampling indicate that the analytical performance standard for clean closure of structures and materials specified in the closure plan, DOE/RL-96-82, Rev. 1, Hanford Facility Dangerous Waste Closure Plan, 241-Z Treatment and Storage Tanks, has been met. As summarized in the data summary, only trace levels of any constituents of concern (COC) were detected, well below any level of concern.

DATA Summary:

Three field samples and a field blank sample were analyzed. All results were well within regulatory limits. Most results were below detection limit, only trace levels of constituents of concern were detected.

Sample results in mg/L except pH Highest detected value reported							
Waste Old D-8 Newer B1FXY8 Field Regular COC Number inlet D-8 inlet D-8 outlet Blank Limi							
Corrosivity	D002	6.08	4.9	8.89	5.82	pH = < 2, >12.5	
Carbon Tetrachloride	D019	< 0.3	< 0.3	< 0.3	< 0.3	0.50	
Arsenic (As)	D004	< 0.04	< 0.04	0.05	< 0.04	5.00	
Barium (Ba)	D005	0.0099 (J)	< 0.005	< 0.005	< 0.005	100.00	
Cadmium (Cd)	D006	< 0.004	0.0052*	< 0.004	< 0.004	1.00	
Chromium (Cr)	D007	0.0521	0.105	0.0232 (J)	< 0.0025	5.00	
Lead (Pb)	D008	< 0.03	< 0.03	< 0.03	< 0.03	5.00	
Selenium (Se)	D010	< 0.04	< 0.04	< 0.04	< 0.04	1.00	
Silver (Ag)	D011	< 0.005	0.0131	< 0.005	< 0.005	5.00	
Mercury	D009	< 0.0001	0.00018 (J)	< 0.0001	< 0.0001	0.20	

^{*} Qualifier of "U" on cadmium analysis of sample B1FXY7 reflects non-detect of the result but since the QC duplicate analysis reported a value that was above the detection limit it would be used.

241-Z D-4 Cell RCRA Closure
Attachment A - Sample Results

D-5 Batch 288 sample report

As part transfer to Tank Farms samples were taken of the final batch from 241-Z prior to transfer approval. Due to the nature of the waste, the sampling protocol focused on addressing criticality concerns with the solid fraction. This concern results in the centrifugal separation of the liquid and solid fraction of the waste prior to analysis. As reflected in the data summary below, of the constituents analyzed, no constituents of concern (COC) were detected above a regulatory level in either of the phases analyzed.

DATA Summary:

Grab samples from the D-5 tank were analyzed prior to the last transfer to Tank Farms. All reported results were within regulatory limits. Not all COC (Hg and carbon tetrachloride) were fully analyzed. Due to interference and sample dilution the detection level for Arsenic and Selenium were not below regulatory levels. Most results were below detection limit, only trace levels of constituents of concern were detected.

			μg/mL or μg/g value reported		
coc	Waste Number	S04T000 660, 666, or 667 Liquid	Applicable Regulatory Limit	S04T000 664 and 665 Solids	Applicable Regulatory Limit
Corrosivity	D002	*	N/A	*	N/A
Carbon Tetrachloride	D019		0.5	•	10
Arsenic (As)	D004	< 5.14	5	<34.6	100
Barium (Ba)	D005	< 0.730_	100	< 5.07	2000
Cadmium (Cd)	D006	< 0.420	1	< 2.92	20
Chromium (Cr)	D007	3.95	5	74	100
Lead (Pb)	D008	< 2.46	5	< 17.1	100
Selenium (Se)	D010	< 4.94	1	<34.3	20
Silver (Ag)	D011	0.454	5	16.3	50.0
Mercury	D009	<0.002	0.2		4

^{*} Liquid is pH adjusted prior to transfer to Tank Farms to above 13. After this batch was transferred the tank was refilled with clean water twice and transferred to Tank Farms. This flush water was not pH adjusted prior to transfer.

241-Z D-4 Cell RCRA Closure
Attachment A – Sample Results

D-5 Batch 286 sample report and subsequent flush overflow

As part of routine operation, 241-Z tank system samples were taken of the batch 286 prior to transfer to tank farms. Subsequent to the transfer of the batch, a flush of the D-5 tank was initiated but resulted in an overflow of the tank to the overflow tank in the D-7 cell and into the D-4 tank. Summarized below is the data associated with batch 286. Of the constituents analyzed, chromium was the only constituents of concern (COC) detected above a regulatory level in the solid portion of the waste batch. This waste batch was significantly higher than normal and the solids represented approximately 40% of the waste batch.

DATA Summary:

Grab samples from the tank D-5 were sample were analyzed prior to the transfer to Tank Farms of batch 286. With the exception of Chromium in the solids portion of the sample, all results were within regulatory limits. Not all COC (Hg and carbon tetrachloride) were fully analyzed. All the detection levels for constituents analyzed were below regulatory levels. Most results were below detection limit, only trace levels of constituents of concern were detected.

		Sample results in µg/mL or µg/g Highest detected value reported			
сос	Waste Number	S003Z002 8/31 Liquid µg/mt	Applicable* Regulatory Limit	S03Z0003 3 Solids µg/g	Applicable* Regulatory Limit
Corrosivity	D002	*	N/A	*	N/A
Carbon Tetrachloride	D019	_	0.5	-	10
Arsenic (As)	D004	< 2.57	5	<10.3	100
Barium (Ba)	D005	< 1.05	100	<4.21	2000
Cadmium (Cd)	D006	< 1.06	1	10.6	20
Chromium (Cr)	D007	3.34	5	258	100
Lead (Pb)	D008	< 1.17	5	15.3	100
Selenium (Se)	D010	.0518	1	<10.4	20
Silver (Ag)	D011	1.48	5	6.74	100
Mercury	D009	.0148	0.2	•	4

^{*} Liquid is pH adjusted prior to transfer to Tank Farms to above 13. After this batch was transferred the tank was refilled with clean water and transferred to Tank Farms. This flush water is not pH adjusted and is at a pH below regulatory level. It was this flush water that was introduced into the overflow tank in D-7 cell and into D-4 tank.

241-Z D-4 Cell RCRA Closure
Attachment A – Sample Results

D-4 Cell Sampling Data Report (B1K9V1, B1K9V2, B1K9V3, B1K9V5)

As part of RCRA closure of 241-Z tank system samples were taken at four locations in the D-5 Cell per HNF-25105, Rev. 1, Sampling and Analysis Plan for Characterization of 241-Z Tank System Piping, Attachment B. Consistent with the sampling and analysis plan an additional sample was taken in a floor area where spill residuals from a historical piping leak had been cleaned up. The results of the sampling indicate that the analytical performance standard for clean closure of structures and materials specified in the closure plan, DOE/RL-96-82. Rev. 1, Hanford Facility Dangerous Waste Closure Plan, 241-Z Treatment and Storage Tanks, has been met. As summarized in the data summary, only trace levels of any constituents of concern (COC) were detected, well below any level of concern.

DATA Summary:

Three field samples and a field blank sample were analyzed. All results we re well within regulatory limits. Most results were below detection limit, or quantification limit (J), only trace levels of constituents of concern were detected.

Sample results in µg/mL except pH Highest detected value reported							
coc	Waste#	B1K9V1 Floor	BIK9V2 Wali	B1K9V3 Tank	B1K9V5 Field Blank	Derived Regulatory Concern Limit*	
Corrosivity	D002	8.06	6.84	6.23	6.90	N/A	
Carbon Tetrachloride	D019_	0.00055	< 0.00055	< 0.00055	0.00055	0.125	
Arsenic (As)	D004	< 0.059	< 0.059	< 0.059_	< 0.059	1.25	
Barium (Ba)	D005	0.0159 (J) < 0.003	0.0098 (J) < 0.003	0.113	< 0.007 < 0.003	25.0 0.25	
Cadmium (Cd) Chromium (Cr)	D007	< 0.014	0.0198 (J)	< 0.014	< 0.014	1.25	
Lead (Pb)	D008	0.0425 (J)	< 0.036	0.296 (J)	< 0.036	1.25	
Selenium (Se)	D010_	< 0.064	< 0.064_	< 0.064_	< 0.064	0.25	
Silver (Ag)	D011	< 0.004	< 0.004	< 0.004	< 0.004	1.25	
Mercury	D009_	0.000616 (J)	< 0.0004	0.00116(J)	< 0.0004	0.05	

* Derived Regulatory Concern Limit" is based on the toxicity characteristic leaching procedure (TCLP) value associated with analysis of a solid sample, adjusted for dilutions associated with the sample analysis. A swipe was assumed to contain 2.5 grams of dried material that was extracted into 200 ml of water. Normal TCLP extraction involves 20 ml of solution per gram of waste so 2.5 grams would normally be extracted in 50 ml of solution. Rather than adjust the data by a multiple of 4 to reflect the dilution (200/50) the regulatory limit is reduced by a factor of 4, e.g. TCLP for lead = 5 ppm become 1.25 ppm or 1.25 µg/mL.

241-Z D-4 Cell RCRA Closure
Attachment B - Cell Activity Log

ATTACHMENT B

Cell Activity log

241-Z D-4 Cell RCRA Closure
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241-Z D-4 Cell RCRA Closure Attachment B – Cell Activity Log

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Date	Pit - Dive#	Comments	
12-Jul-06	D4-1	Initial entry characterize cell	
13-Jul-06	D4-2	Prep waste for load out	
17-Jul-06	D4-3	Cut ladders and bag waste	
18-Jul-06	D4-4	Waste load out (hoist broke)	
19-Jul-06	D4-5	Cut pipe (tasks #1, 3, & 4)	
20-Jul-06	D4-6	Waste load out	
21-Jul-06	D4-7	Cut pipe tasks #1 & 19	
23-Jul-06	D4-8	Graveyard - waste load out	
23-Jul-06	D4-9	Cut pipe tasks #10 & #11	
24-Jul-06	D4-10	Cut agitator conduit & waste load out	
25-Jul-06	D4-11	Cut pipe tasks #14 & 15	
26-Jul-06	D4-12	Cut pipe task #15	
27-Jul-06	D4-13	Waste load out	
30-Jul-06	D4-14	Graveyard - cut pipe task #14	
30-Jul-06	D4-15	Cut pipe task #12 & 13	
31-Jul-06	D4-16	Waste load out	
1-Aug-06	D4-17	Video below grating, stage safety rail	
2-Aug-06	D4-18	Graveyard - Install 20" duct below grating	
2-Aug-06	D4-19	Clean cell floor	
3-Aug-06	D4-20	Clean floor	
4-Aug-06	D4-21	Clean floor package waste	
6-Aug-06	D4-22	Graveyard - DAC issues fog below grating	
6-Aug-06	D4-23	Waste load out	
7-Aug-06	D4-24	Waste load out	
8-Aug-06	D4-25	Cut pipe below grating task #3	
9-Aug-06	D4-26	Cut pipe below grating task #16	
10-Aug-06	D4-27	Waste load out	
13-Aug-06	D4-28	Cut pipe finished below grating	
13-Aug-06	D4-29	Waste load out	
14-Aug-06	D4-30	Prep floor waste for load out	
15-Aug-06	D4-31	Clean floor squeegee & sump	
16-Aug-06	D4-32	RCRA floor and wall samples & load out	
18-Aug-06	D4-33	Layout cut on tank and drill pilot hole	
20-Aug-06	D4-34	Drain agitator oil (confirm empty) & load out	
20-Aug-06	D4-35	Video inside tank and set up for tank fogging	
21-Aug-06	D4-36	Set up and start fogging tank	
22-Aug-06	D4-37	Demobilize fogging equipment	
23-Aug-06	D4-38	P shift diverted to install tank exhauster & isolate vent	
23-Aug-06	D4-39	Plasma arc cut door in tank wall	
24-Aug-06	D4-40	Waste load out	
27-Aug-06	D4-41	Clean tank - high DAC and high heat	

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Date	Pit - Dive#	Comments
27-Aug-06	D4-42	Clean tank
28-Aug-06	D4-43	Clean tank and mop tank walls
29-Aug-06	D4-44	Clean tank - final squeegee & prep for load out
29-Aug-06	D4-45	Graveyard - Load out tank waste
30-Aug-06	D4-46	NDA tank and take tank dose survey
31-Aug-06_	D4-47	NDA floor & walls
31-Aug-06	D4-48	NDA floor & walls (1st part of swing shift)
7-Sep-06	D4-49	Remove fall hazards (rods, etc.), size reduce equip.
10-Sep-06	D4-50	NDA floor & walls, package waste
11-Sep-06	D4-51	Finished NDA floor & walls, size reduce equip
12-Sep-06	D4-52	Load out waste (high DAC @ 60 min.)
13-Sep-06	D4-53	Waste load out (high DAC below grating)
13-Sep-06	D4-54	Swing shift - RCRA video inspection of floor
14-Sep-06	D4-55	Waste load out (prep paint hoses)

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